Module: Reinforcement

Steps for Implementation: Positive Reinforcement


Reinforcement is an evidence-based practice used to increase appropriate behavior and teach new skills (e.g., replacement behavior in place of an interfering behavior). This document outlines the steps for implementing positive reinforcement with learners with ASD. Positive reinforcement is the contingent presentation of a stimulus (i.e., reinforcer) immediately following a learner’s use of a target skill/behavior. This relationship between the use of a target skill/behavior and receiving reinforcement increases the future rate and/or probability that the learner will use the skill again.

When planning for and implementing positive reinforcement with learners with ASD, the following steps are recommended.

Step 1. Identifying the Target Skill/Behavior

In Step 1, teachers/practitioners identify a target skill/behavior for a learner with ASD that they would like to increase.

1. Teachers/practitioners define the target skill/behavior in observable and measurable terms.

Example: Sarah will stay seated during English class for 30 minutes.

Describing the target skill/behavior in measurable and observable terms allows teachers and other practitioners to collect accurate and reliable baseline data, deliver reinforcement when the learner uses the target skill/behavior correctly, and ensures that all staff members understand what the target skill/behavior looks like so that reinforcement can be delivered consistently across classes and activities.

Step 2. Collecting Baseline Data

Once the target skill/behavior is identified, teachers/practitioners collect baseline data to determine how often the learner with ASD is currently using the target skill/behavior.

1. Teachers/practitioners measure a learner’s use of the target skill/behavior before implementing reinforcement by collecting one of the following:

   a. frequency data. Frequency data measures how often a learner engages in a particular behavior. Two methods are used to collect frequency data: time sampling and event sampling. With time sampling, data on a particular behavior are collected after a certain amount of time (e.g., every five minutes). If a learner is engaging in
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the behavior at that time, then teachers/practitioners record this on the data sheet. This sampling technique is best used to monitor high frequency behaviors such as engagement and parallel play. Event sampling is used to record every instance of the behavior and typically focuses on low frequency behaviors such as taking a toy from a peer, putting on a coat, and saying, “Hello” to a peer when coming into the classroom. Both sampling techniques are used to evaluate patterns of behavior over a period of days or weeks. Tables 1 and 2 provide examples of both frequency data collection methods.

Table 1. Example of Time Sampling Data Collection Sheet

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Before, during, or after reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/26/08</td>
<td>X</td>
<td>2 Before</td>
</tr>
<tr>
<td>7/27/08</td>
<td>X</td>
<td>2 Before</td>
</tr>
<tr>
<td>7/28/08</td>
<td>X</td>
<td>4 Before</td>
</tr>
<tr>
<td>7/29/08</td>
<td>X</td>
<td>4 Before</td>
</tr>
</tbody>
</table>

Table 2. Example of Event Sampling Data Collection Sheet

<table>
<thead>
<tr>
<th>Date</th>
<th>Takes toy from peer</th>
<th>Total</th>
<th>Before, during, or after reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/26/08</td>
<td>X</td>
<td>1</td>
<td>Before</td>
</tr>
<tr>
<td>7/27/08</td>
<td>X</td>
<td>1</td>
<td>Before</td>
</tr>
<tr>
<td>7/28/08</td>
<td>X</td>
<td>1</td>
<td>Before</td>
</tr>
<tr>
<td>7/29/08</td>
<td>XXX</td>
<td>3</td>
<td>Before</td>
</tr>
</tbody>
</table>

b. duration data. Duration data are used to record how long a learner engages in a particular behavior. For example, a teacher might collect data on how long a learner with ASD stays in his seat or how long a young child stays engaged in parallel play. Table 3 provides an example duration data collection sheet. Blank data sheets are available in a separate document.

Table 3. Example of Duration Data Collection Sheet for Playing with Peers

<table>
<thead>
<tr>
<th>Date</th>
<th>Start time</th>
<th>End Time</th>
<th>Total minutes</th>
<th>Setting/activity</th>
<th>Before, during, or after reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/26/08</td>
<td>9:00</td>
<td>9:01</td>
<td>1</td>
<td>Free play</td>
<td>Before</td>
</tr>
<tr>
<td>7/27/08</td>
<td>9:05</td>
<td>9:06</td>
<td>1</td>
<td>Outside</td>
<td>Before</td>
</tr>
<tr>
<td>7/28/08</td>
<td>9:00</td>
<td>9:02</td>
<td>2</td>
<td>Small groups</td>
<td>Before</td>
</tr>
<tr>
<td>7/29/08</td>
<td>9:10</td>
<td>9:12</td>
<td>2</td>
<td>Large group</td>
<td>Before</td>
</tr>
</tbody>
</table>

Baseline data give teachers/practitioners a starting point from which they can evaluate whether the target skill/behavior increases as a result of reinforcement.

2. Teachers/practitioners collect baseline data for a minimum of four days or until a trend occurs before implementing reinforcement.
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A trend is generally used to evaluate intervention effects. Teachers/practitioners can begin implementing reinforcement when data indicate that the trend during baseline is stable; that is, there is no clear pattern to the learner’s behavior. This is important because teachers/practitioners need to be able to determine whether the learner’s use of the target skill is improving as a result of reinforcement. If a learner’s use of the target skill is increasing during baseline without the use of reinforcement, then no intervention is needed. However, if there is no clear pattern to the learner’s behavior, teachers/practitioners will be able to make clear decisions about the effectiveness of the intervention after it is implemented.

Trends typically are identified by viewing data points on a graph. The following are two examples of graphed baseline data. The first provides an example of a stable trend; whereas the other example illustrates a clear trend in the learner’s use of the target skill. When analyzing these data, teachers/practitioners would only implement the intervention with the first example.

![Example Trend 1](image1)
![Example Trend 2](image2)

3. Teachers/practitioners collect baseline data in numerous settings and/or activities.

Collecting data in a variety of settings and/or activities provides valuable information about a learner’s use of the target skill. For example, a learner may request more frequently during one activity than another. A different learner may consistently raise his hand during one class, but not another. These data provide teachers/practitioners with information about where and when reinforcement should be used to increase or strengthen a learner’s use of a target skill. It often is useful to have more than one practitioner collect baseline data over the course of several days to compare findings. Also, by collecting data over the course of several days in multiple settings, teachers/practitioners can potentially recognize patterns of behavior. For example, does the learner use the target skill/behavior more often in one setting than another? This kind of information helps teachers/practitioners identify activities or settings in which reinforcement can be used to increase the target skill/behavior.

Step 3. Establishing Program Goals and Performance Criteria
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In Step 3, teachers/practitioners identify goals for the target skill/behavior and identify the criteria that will be used to evaluate whether positive reinforcement is effective.

1. Teachers/practitioners establish a program goal for each target skill/behavior that is age and developmentally appropriate for the learner with ASD.

The following are two examples of program goals for learners with ASD.

Example: Mike will say “hello” to three peers each time he enters a classroom.

Example: Sarah will stay seated in English class every day for 30 minutes.

Performance criteria also are established for each target skill/behavior so that teachers/practitioners can monitor learner progress and adjust reinforcement strategies as learners gain mastery of target skills/behaviors. The initial criterion should be easily attained so that learners can be successful without much effort and can acquire the identified reinforcer more easily. This also helps the learner establish a clear connection between the target skill/behavior and subsequent reinforcement. For example, a teacher might decide that an initial criterion for “staying seated in English class” is five minutes for three consecutive days. The teacher would then collect duration data to monitor learner progress. When the learner with ASD meets this criterion, the teacher gradually increases the amount of time that the learner is required to stay seated in English class until the program goal is acquired. As the learner with ASD gradually masters the target skill/behavior, the criteria are adjusted so that reinforcement is gradually faded.

2. Teachers/practitioners establish at least three different performance criteria for each program goal to monitor progress.

Table 4 outlines a program goal and performance criterion developed for a learner with ASD.

| Program Goal: Sarah will stay seated in English for 30 minutes every day. |
|---|---|
| **Performance Criterion** | **Behavior** |
| Phase 1 | Sarah will stay seated in English class for 5 minutes for three consecutive days. |
| Phase 2 | Sarah will stay seated in English class for 15 minutes for three consecutive days. |
| Phase 3 | Sarah will stay seated in English class for 30 minutes every day. |
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Step 4. Identifying Positive Reinforcers

In Step 4, teachers/practitioners identify positive reinforcers for learners with ASD. Positive reinforcers are anything that increases the likelihood that the target skill/behavior will be used in the future. This is important because learning will not take place unless reinforcers are motivating to the learner with ASD and are delivered effectively. Teachers/practitioners should keep in mind that many of the reinforcers often used with typically developing students may not be motivating to learners with ASD (e.g., social praise, high fives). It is essential that teachers/practitioners identify reinforcers for each learner with ASD so that they are sufficiently motivating and lead to an increase in the target skill/behavior.

Reinforcers are generally categorized as either primary or secondary. Primary reinforcers satisfy a physical need by making the individual feel good (e.g., food, liquids, sleep). Secondary reinforcers are objects or activities that individuals have grown to like, but do not need biologically. Potential reinforcers include the following:

- **Social reinforcers** are found in virtually any setting. Social reinforcers often must be taught to learners with ASD because they may not be inherently reinforcing.
  
  EXAMPLES: Facial expressions (e.g., smiles), proximity (e.g., sitting next to teacher), words and phrases (e.g., “Good job!” “Way to go!”), seating arrangements (e.g., sitting alone, sitting next to favorite peer)

- **Material/activity reinforcers** can be motivating to learners with ASD; however, teachers/practitioners should vary these kinds of reinforcers with others so that learners do not grow tired of them.
  
  EXAMPLES: Play activities, access to computer games, stickers, “cool” school supplies (e.g., Spiderman erasers)

- **Tangible/edible reinforcers** include objects that a learner with ASD can acquire.
  
  EXAMPLES: Stickers, toys, magazines, pencils, candy, popcorn

- **Sensory reinforcers** often are motivating to learners with ASD. However, these types of reinforcers should be used only when (1) the teacher can control access to them, (2) the reinforcer is deemed acceptable and appropriate for the setting, and (3) no other reinforcer is as motivating to the learner with ASD.
  
  EXAMPLES: Looking at a kaleidoscope, blowing bubbles, playing with a squishy ball, sitting in a rocking chair, rubbing hand lotion on hands

- **Natural reinforcers** are ordinary results of a behavior and occur naturally in the environment. These types of reinforcers naturally occur as a direct result of using the target behavior.
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*EXAMPLES: Receiving a good grade after studying, getting milk after asking for it, having more friends as a result of having good social skills, getting a break after asking for it*

All of these reinforcers can be powerful tools to help learners acquire and maintain the use of target skills. With learners with ASD in particular, motivation can be a central concern for developing new skills. By using reinforcers such as these, teachers/practitioners increase the likelihood that learners with ASD will use target skills more consistently. The key is to identify reinforcers that are motivating for individual learners. If a learner with ASD is not motivated by a particular reinforcer, he will be less likely to use the target skill now and in the future.

The following activities can be used to identify reinforcers for individual learners with ASD.

1. Teachers/practitioners consider the age of the learner with ASD.

It is particularly important to take into account the learner’s age when identifying potential reinforcers. For example, it would probably not be appropriate for a sixth grader with ASD to play with Thomas trains in an inclusive classroom. This kind of reinforcement might best be saved for times when the learner receives services in a resource room with other learners with ASD or other disabilities.

2. Teachers/practitioners consider the target skill/behavior and natural reinforcers that could be used to teach the skill.

This activity allows teacher/practitioners to identify potential reinforcers that naturally go with the target skill/behavior. For example, a learner with ASD might be given free time after engaging in a non-preferred task. Typically developing students often are allotted free time after completing an assignment in class; therefore, it seems logical that learners with ASD would be given the opportunity to choose a preferred activity after completing a difficult or challenging task. With a young child, a teacher might use a learner’s favorite food at snack to reinforce requesting. Food, in this instance, is a natural reinforcer because it is typically included in this activity.

Natural reinforcers offer several advantages. First, they can be provided more easily than other reinforcers such as edibles (other than at meal times) and material reinforcers. Second, natural reinforcers are more likely to be available to the learner with ASD after the target skill/behavior has been learned. For instance, teachers often use praise after learners complete an assignment or activity correctly. Alternatively, typically developing peers may engage in more prolonged social interactions with learners with ASD as they use newly acquired skills appropriately during social activities. As learners acquire new skills, naturally occurring reinforcers (e.g., praise, prolonged social interactions, receiving something after asking for it) motivate learners with ASD to use the skills they have learned in a variety of situations and with many different individuals. Finally, natural reinforcers automatically occur on a contingent basis. For example, a teacher will not praise a learner for staying seated in class if he does not exhibit this behavior.
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3. Teachers/practitioners observe the learner in natural settings and identify:
   a. activities, objects, and foods that the learner selects when allowed free choice.
   b. phrases and gestures that seem to produce a pleasant response (e.g., smiling, laughing, clapping) from the learner with ASD.

4. Teachers/practitioners identify potential reinforcers by asking the learner what he/she would like to work for (if appropriate).

5. Teachers/practitioners identify potential reinforcers by interviewing parents or other staff to identify reinforcers that have worked in the past.

6. Teachers/practitioners identify potential reinforcers by conducting a reinforcer sampling.

Reinforcer sampling helps teachers/practitioners identify activities and materials that are motivating to the learner and might be used to teach new skills. This type of procedure usually takes about five minutes and involves the steps listed below.

- Sit in front of the learner and hold up two items and say to the learner, "Pick one."
- Wait ten seconds for the learner to indicate his/her choice in whatever manner is appropriate to the learner (e.g., reaching, pointing, verbalizing, using a switch or augmentative communication device).
- Place the selected and non-selected objects in their appropriate containers (i.e., one to hold the learner’s selections, one to hold the materials not selected).
- Continue the first three steps until half the objects presented are chosen (Mason & Egel, 1995).

7. Teachers/practitioners complete a reinforcer checklist to identify potential reinforcers for a learner with ASD.

Table 5 provides an example reinforcer sampling menu that may be used to identify reinforcers for individual learners with ASD.

Table 5. Sample Reinforcer Menu Sampling

<table>
<thead>
<tr>
<th>Example: Elementary Reinforcer Menu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner name: ______________________</td>
</tr>
<tr>
<td>Target skill/behavior: ______________ Date: __________________</td>
</tr>
</tbody>
</table>

Instructions: Ask individual learners to place a check (✓) next to at least eight items/activities they would like to earn. Read the list to non-readers and help them mark the items they select.

  1. Blow bubbles
  7. Sit in rocking chair
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<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Ice cream</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Coloring/drawing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Extra computer time</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Squishy ball</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Lollipop</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Read/look at book</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. Go to resource room</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10. Stickers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11. Play dough</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12. Time alone</td>
</tr>
</tbody>
</table>

**Step 5. Creating a Reinforcer Menu**

1. Teachers/practitioners create a menu of possible reinforcers listed by name (if the learner with ASD can read) or by picture (or real item) for an individual learner with ASD.

This task allows teachers/practitioners to organize potential reinforcers in an orderly manner. Potential reinforcers can be organized according to categories such as social reinforcers, activity reinforcers, and sensory reinforcers.

The following tables illustrate two different reinforcer menus that could be used with learners with ASD.
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Table 6. Example of Picture Reinforcer Menu

<table>
<thead>
<tr>
<th>PLAY COMPUTER GAME</th>
<th>PLAY BASKETBALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIT IN ROCKING CHAIR</td>
<td>PLAY WITH TRAINS</td>
</tr>
</tbody>
</table>

Table 7. Example of Written Reinforcer Menu

If I stay in my seat for 10 minutes, I would like:

<table>
<thead>
<tr>
<th>Circle choice for this class</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ten minutes of extra play time on the computer</td>
</tr>
<tr>
<td>• Extra recess time</td>
</tr>
<tr>
<td>• Puzzles</td>
</tr>
<tr>
<td>• Blow bubbles</td>
</tr>
<tr>
<td>• Erase the chalkboard</td>
</tr>
</tbody>
</table>

Adapted from Aspy & Grossman (2007)

2. Teachers/practitioners allow the learner with ASD to select a desired object, activity, or food from the reinforcer menu before or after the activity/class begins.

Learners also can be given a “my choice” option on the reinforcer menu in which they are able to engage in desired activities after using the target skill/behavior. This is particularly useful in instances in which learners select a reinforcer before the activity, but change their minds after the activity is complete. Including this option on the reinforcer menu may combat potential problems that might arise in these situations.
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**Step 6. Selecting a Schedule of Reinforcement**

In Step 6, teachers/practitioners establish a reinforcement program by selecting a schedule of reinforcement. Schedules of reinforcement refer to the frequency or timing of the delivery of reinforcement following a target skill/behavior. For example, a reinforcer can be delivered either on a continuous or on an intermittent schedule. A *continuous reinforcement schedule* is used when learners with ASD are reinforced each and every time they use the target skill/behavior. Continuous reinforcement schedules are best used when a learner is first learning a target skill/behavior and has not yet made a clear association between the target skill/behavior and the reinforcement.

1. Teachers/practitioners select continuous reinforcement when a learner with ASD is first learning the target skill/behavior.

Once a learner with ASD makes the association between the target skill/behavior and the reinforcement, an *intermittent schedule of reinforcement* can be employed. This is particularly important because learners can easily grow tired of a particular reinforcer and have difficulty generalizing and maintaining use of the target skill/behavior. With intermittent reinforcement, learners are reinforced after some occurrences of the target skill/behavior, but not each and every time they use it. Table 8 outlines two intermittent reinforcement schedules.

2. Teachers/practitioners select an intermittent reinforcement schedule when a learner with ASD has met the initial performance criterion for the target skill/behavior (see Step 3).

### Table 8. Intermittent Reinforcement Schedules Used with Learners with ASD

<table>
<thead>
<tr>
<th>Type of Reinforcement</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Ratio reinforcement schedules** | Reinforcement is provided after a specific number of correct responses, using either fixed or variable ratio reinforcement schedules.  
  *Fixed.* Reinforcement is delivered after a specified number of correct responses. For example, when a learner raises his hand in class, the teacher calls on him every third time.  
  *Variable.* A learner is reinforced based on an average number of correct responses. For example, if the average number of correct responses is three, a teacher might call on a learner after he raises his hand two times and then after he raises his hand four times. |
| **Interval reinforcement schedules** | Learners are reinforced after a period of time, using either fixed interval or variable interval reinforcement schedules.  
  *Fixed.* A learner is reinforced following a specified amount of time (e.g., reinforcement is provided for every five minutes of staying seated).  
  *Variable.* Reinforcement is provided after an average amount of time (e.g., a teacher might provide reinforcement on an average of every 5 minutes. Sometimes the amount of time between reinforcement will be longer than 5 minutes, and sometimes it will be shorter. |
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Step 7. Implementing Continuous Reinforcement

When first teaching a behavior, teachers/practitioners often use continuous reinforcement.

1. Teachers/practitioners immediately deliver reinforcement each time the learner with ASD uses the target skill/behavior.

When teachers/practitioners provide reinforcement in this manner, learners with ASD begin to associate their behavior with the reinforcement quickly and efficiently.

2. Teachers/practitioners describe the target skill/behavior after the learner uses it correctly.

*Example:* A teacher might say, “You stayed in your seat for five minutes. Now you can play computer games.”

3. Teachers/practitioners deliver identified reinforcers only when the learner with ASD uses the target skill/behavior.

The learner with ASD begins to associate the reinforcer with the target skill/behavior when it is delivered contingently. That is, learners do not have access to the reinforcer until the behavior is displayed. If learners with ASD have access to the identified reinforcer at other times, then it becomes less motivating to them, and they are less likely to use the target skill/behavior.

4. Teachers/practitioners provide small amounts of the identified reinforcer after the learner with ASD uses the target skill/behavior.

If the learner with ASD receives too much of the identified reinforcer then it becomes less motivating. For example, if a learner with ASD gains access to a preferred activity after completing a more challenging task, the teacher/practitioner should limit the amount of time the learner stays engaged in the activity.

5. When using activity or material reinforcers (e.g., tangible, activity, sensory), teachers/practitioners pair them with social reinforcement (e.g., praise, teacher attention).

Because many learners with ASD have not yet learned the value of social reinforcers, teachers/practitioners must teach them to like these types of reinforcers by initially pairing a social reinforcer with a secondary reinforcer. As learners with ASD become more motivated by social reinforcers, teachers/practitioners fade the use of other secondary reinforcers (e.g., edible, sensory).

6. When using primary reinforcers (e.g., food, drink), teachers/practitioners also deliver a secondary reinforcer (e.g., praise, sticker, computer time).
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*EXAMPLE:* A teacher might say, “Good job” when giving a learner with ASD playdough after completing five math problems.

The combined use of primary and secondary reinforcers is called pairing. When pairing is used, learners become less dependent upon primary reinforcers and learn the value of secondary reinforcers, particularly important for learners with ASD. Once learners with ASD become motivated by secondary reinforcers (e.g., praise, computer time), the use of primary reinforcers should be withdrawn.

**Step 8. Preventing Satiation**

In Step 8, teachers/practitioners focus on preventing satiation so that the identified reinforcers do not lose their effectiveness. Reinforcers often become less effective when the same reinforcement is used too frequently. It is also important to note that a particular reinforcer may be reinforcing one day and not the next day. Having a menu of reinforcers helps prevent satiation by providing a variety of reinforcers from which teachers/practitioners and learners with ASD can choose.

1. Teachers/practitioners vary reinforcers for a target skill/behavior or use different reinforcers for each target skill/behavior.

*Example:* A teacher uses two identified reinforcers during a teaching activity: stickers and verbal praise. The teacher alternates her use of the reinforcers so that the learner does not grow tired of one or the other.

*Example:* A teacher uses only edible reinforcers during snack when a child with ASD requests “more” and only activity reinforcers when trying to get the same child to increase time spent in a non-preferred activity.

2. Teachers/practitioners teach the target skill/behavior during several short instructional sessions.

Shorter instructional sessions decrease the chances of satiation. Several short instructional sessions should be implemented throughout the day during ongoing classroom routines and activities rather than one long instructional session.

*Example:* Requesting is the target of instruction during snack (using favorite foods), at circle time (requesting favorite song), and during free play (placing preferred toys out of reach).

3. Teachers/practitioners avoid using edible reinforcers. *If they must be used, teachers/practitioners use them minimally and offer a variety.*

Edible reinforcers should be used sparingly because they are primary reinforcers. Therefore, teachers/practitioners should focus on using edible reinforcers only if other reinforcers have not been identified for a particular learner with ASD. When they are used they should be used...
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minimally (e.g., teachers/practitioners can use smaller portions so that learners “savor” their five M&M’s) and are paired with other types of reinforcement (e.g., praise, pats on the back).

4. Teachers/practitioners shift from using primary to secondary reinforcers as soon as possible.

This is particularly important for learners with ASD because they often do not find secondary reinforcers such as stickers and praise motivating. However, when teachers pair the use of secondary reinforcers with primary reinforcers, learners with ASD are increasingly motivated by things other than food and liquids. As learners with ASD become increasingly motivated by secondary reinforcers, teachers/practitioners should gradually withdraw the use of primary reinforcers.

5. If satiation does occur, teachers/practitioners start using a different reinforcer.

Often times, teachers/practitioners can identify if satiation is occurring because learners with ASD stop using target skills that have been previously mastered. For example, a learner with ASD may stop raising his hand during class because he is no longer motivated by a reinforcer that he receives frequently. The solution to this may be as simple as choosing another reinforcer from the reinforcer menu. The important point is that the reinforcer must be motivating to the learner with ASD or increases in the target skill/behavior will not occur.

Step 9. Monitoring Learner Progress

In Step 9, teachers/practitioners monitor learner progress so that reinforcement can be gradually reduced to promote generalization and maintenance of skills. Progress monitoring data also are used to adjust the reinforcement plan when the target skill/behavior is not increasing.

1. Teachers/practitioners use progress monitoring data to determine the learner’s mastery of the target skill/behavior.

The same data collection sheets that were used before the intervention began are used to monitor learner progress. By using the same data collection sheets, teachers/practitioners are able to track a learner’s use of the target skill/behavior before and after positive reinforcement is implemented. The following data collection sheets provide examples of how teachers/practitioners can use these data sheets before, during, and after intervention.

Table 9. Example of Time Sampling Data Collection Sheet

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Before, during, or after reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/26/08</td>
<td>X</td>
<td>Before</td>
</tr>
<tr>
<td>7/27/08</td>
<td>X</td>
<td>Before</td>
</tr>
<tr>
<td>7/28/08</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7/29/08</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Table 10. Example of Event Sampling Data Collection Sheet

<table>
<thead>
<tr>
<th>Date</th>
<th>Takes toy from peer</th>
<th>Total</th>
<th>Before, during, or after reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/26/08</td>
<td>X</td>
<td>1</td>
<td>Before</td>
</tr>
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2. As learners with ASD meet performance criterion for a target skill/behavior, teachers/practitioners move from a continuous reinforcement schedule to intermittent schedules of reinforcement (i.e., ratio, interval schedules).

*Example:* A learner with ASD has reached the criterion of “staying seated during English class for 30 minutes every day.” The teacher decides that she will now provide reinforcement using a variable interval schedule of 10. Therefore, the teacher now reinforces the learner’s behavior on average every 10 minutes. Sometimes, she will reinforce the learner’s use of the target skill/behavior after 7 minutes. The next time, she may reinforce the learner staying seated after 13 minutes.

Fading of reinforcement schedules is beneficial in a number of ways. For example, when teachers/practitioners move from continuous to intermittent schedules of reinforcement, learners with ASD use the target skill/behavior more frequently and are able to maintain the use of the behavior over long periods of time. Furthermore, target skills/behaviors are increasingly reinforced in ways (e.g., teacher praise, attention) that are more readily available in natural environments such as the classroom and in the community.

3. Teachers/practitioners use progress monitoring data to adjust reinforcement strategies if the target skill/behavior is not increasing.

If a target skill/behavior is not increasing, teachers/practitioners must try to identify potential reasons for this. The following questions may be helpful during this problem-solving process.

- Is the target skill/behavior well defined? That is, is it observable and measurable?
- Are there too many reinforcers?
- Are there too few reinforcers?
**Module: Reinforcement**

- Are the reinforcers motivating to the learner with ASD?
- Are all staff using reinforcement in a consistent manner?
- Is reinforcement occurring at a sufficient level to maintain the behavior?
Module: Reinforcement

References

The following sources were used to create the steps of implementing reinforcement with learners with ASD.


